

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-9 (canceled)

10. (Currently Amended) A transmitter, comprising:
a sensor that serves to register a physical quantity (X) and convert such into an electrical quantity;
electronics that convert the electrical quantity into a measurement signal and that make the measurement signal available over an electrical current-loop output in the form of a signal current (I) corresponding to the physical quantity; and
a pick-up unit having a magnetoresistive element, whose resistance changes as a function of the magnetic flux (Φ) produced by the signal current (I).

11. (Previously presented) The transmitter as claimed in claim 10, wherein:
said electronics includes a regulating circuit for adjustment of the signal current (I) as a function of the measurement signal.

12. (Cancelled).

13. (Cancelled).

14. (Previously presented) The transmitter as claimed in claim 10, wherein:
the instantaneous signal current registered by means of said pick-up unit is fed to said regulating circuit for regulation of the physical-quantity-dependent, signal current (I).

15. (Cancelled).

16. (Currently Amended) The transmitter as claimed in claim ~~[[15]]~~ 20, wherein:

the adjustment variables (K1, K2, K3) are stored in a memory and are digitally adjustable.

17. (Currently Amended) The transmitter as claimed in claim ~~[[15]]~~ 20, wherein:

said regulating circuit is embodied as an integrated circuit, or

said regulating circuit and said pick-up unit are embodied as an integrated circuit.

18. (Previously presented) The transmitter as claimed in claim 17, wherein:
said integrated circuit also contains a circuit part, which generates from the signal current (I) a supply voltage (V) for the transmitter or parts thereof.

19. (New) A transmitter comprising:

a sensor that serves to register a physical quantity (X) and convert such into an electrical quantity;

electronics that convert the electrical quantity into a measurement signal and that make the measurement signal available over an electrical current-loop output in the form of a signal current (I) corresponding to the physical quantity; and

a pick-up unit having a magnetoresistive element, whose resistance changes as a function of the magnetic flux (Φ) produced by the signal current (I) wherein:

said regulating circuit has a transistor, that is turned-on in operation by a measured-value-dependent control signal generated by said electronics.

20. (New) A transmitter comprising:

a sensor that serves to register a physical quantity (X) and convert such into an electrical quantity;

electronics that convert the electrical quantity into a measurement signal and that make the measurement signal available over an electrical current-loop output in the form of a signal current (I) corresponding to the physical quantity; and

a pick-up unit having a magnetoresistive element, whose resistance changes as a function of the magnetic flux (Φ) produced by the signal current (I) wherein:

the instantaneous signal current registered by means of said pick-up unit is fed to said regulating circuit for regulation of the physical-quantity-dependent, signal current (I); and

a regulating behavior of said regulating circuit is adjustable by one or more adjustment variables ($K1$, $K2$, $K3$).

21. (New) A transmitter comprising:

a sensor that serves to register a physical quantity (X) and convert such into an electrical quantity;

electronics that convert the electrical quantity into a measurement signal and that make the measurement signal available over an electrical current-loop output in the form of a signal current (I) corresponding to the physical quantity; and

a pick-up unit having a magnetoresistive element, whose resistance changes as a function of the magnetic flux (Φ) produced by the signal current (I) wherein:

said pick-up unit is galvanically separated from the electrical current-loop output.